In the Claims

1. (currently amended) A circuit for transforming a singled-ended signal to a differential signal for use by an RF power amplifier suitable for transmitting signals in an RF communication system comprising:

a silicon semiconductor device;

an RF power amplifier formed on the semiconductor device;

a transformer formed on the semiconductor device, the transformer having a primary side with first and second terminals, and a secondary side with first and second terminals coupled to the RF power amplifier;

a pre-driver circuit coupled between the transformer and the power amplifier; and

wherein an RF input signal is coupled to the first terminal of the primary side of the transformer, and wherein a ~~reference~~ ground node is coupled to the second terminal of the primary side of the transformer, producing a differential RF signal at the first and second terminals of the secondary side of the transformer.

2. (original) The circuit of claim 1, wherein the silicon semiconductor device is a complimentary metal-oxide semiconductor (CMOS) device.

3. (original) The circuit of claim 1, wherein the RF communication system is a cellular telephone system.

Claims 4-5 (canceled)

4 ~~6.~~ (previously presented) The circuit of claim 1, wherein the pre-driver circuit further comprises a limiting amplifier.

5 ~~7.~~ (original) The circuit of claim ~~6~~ 4, wherein the limiting amplifier includes a string of inverters.

6 ~~8.~~ (original) The circuit of claim ~~6~~ 4, wherein the limiting amplifier includes an amplifier coupled between the limiting amplifier and the transformer.

7 ~~9.~~ (previously presented) A method of transforming a singled-ended RF signal to a differential RF signal in an RF power amplifier comprising the steps of:

providing a silicon semiconductor device;

forming an RF power amplifier on the semiconductor device;

forming a transformer on the semiconductor device, the transformer having a primary side with first and second nodes, and a secondary side with first and second nodes;

coupling a single ended RF input signal to the first node on the primary side of the transformer and coupling an RF ground signal to the second node on the primary side of the transformer to generate a differential RF signal at the first and second nodes on the secondary side of the transformer;

coupling the first and second nodes of the secondary side of the transformer to the RF power amplifier; and

coupling a predriver circuit between the transformer and the RF power amplifier.

8 ~~10.~~ (original) The method of claim ~~9~~ 7, wherein the silicon semiconductor device is a CMOS device.

9 ~~11.~~ (original) The method of claim 7 ~~9~~, wherein the RF power amplifier is suitable for use in an RF communication system.

10 ~~12.~~ (original) The method of claim 9 ~~11~~, wherein the RF communication system is a cellular telephone system.

11 ~~13.~~ (currently amended) An RF power amplifier suitable for transmitting signals in an RF communication system comprising:

a silicon semiconductor device;

a power amplifier formed on the semiconductor device, the power amplifier having an input and an output; and

PN a preamplifier stage coupled to the input of the power amplifier, wherein the preamplifier stage further comprises a transformer coupled between the input of the power amplifier and an RF input node, wherein the preamplifier stage further comprises a limiting amplifier coupled to the transformer, wherein the limiting amplifier further comprises a plurality of series coupled inverters, and wherein the preamplifier stage is formed on the semiconductor device.

Claims 14-15 (canceled)

12 ~~16.~~ (previously presented) The RF power amplifier of claim 11 ~~15~~, wherein the preamplifier further comprises a DC feedback loop.

13 ~~17.~~ (original) The RF power amplifier of claim 11 ~~13~~, wherein the power amplifier is comprised of a plurality of amplifying stages.

14 11

~~18.~~ (original) The RF power amplifier of claim ~~13~~, wherein the RF communication system is a cellular telephone system.

15 11

~~19.~~ (original) The RF power amplifier of claim ~~13~~, wherein the silicon semiconductor device is a CMOS device.

16

~~20.~~ (original) A method of converting an RF input signal from a first ground potential to a second ground potential for use with an RF power amplifier comprising the steps of:

providing a silicon semiconductor device;

forming an RF power amplifier on the semiconductor device;

PN providing a first input node;

providing a second input node;

forming a transformer on the semiconductor device, the transformer having a primary side and a secondary side, wherein a first terminal of the primary side of the transformer is coupled to the first input node, and wherein a second terminal of the primary side of the transformer is coupled to the second input node;

coupling the first input node to an RF signal and the second input node to a first ground potential to generate an RF signal at a first terminal of the secondary side of the transformer and a second ground potential at a second terminal of the secondary side of the transformer; and

coupling the first and second terminals of the secondary side of the transformer to the RF power amplifier.

17 16

~~21.~~ (original) The method of claim ~~20~~, wherein the silicon semiconductor device is a CMOS device.

18 16
22. (original) The method of claim 20, wherein the RF power amplifier is suitable for use in an RF communication system.

19 18
23. (original) The method of claim 22, wherein the RF communication system is a cellular telephone system.

PN

20 7
24. (previously presented) The method of claim 9, wherein the predriver circuit includes a limiting amplifier coupled between the transformer and the RF power amplifier.

21 7
25. (previously presented) The method of claim 9, wherein the predriver circuit includes a first limiting amplifier coupled between the first node of the secondary side of the transformer and a first RF power amplifier input, and a second limiting amplifier coupled between the second node of the secondary side of the transformer and a second RF power amplifier input.